



Who has broadband? Comparing 2006 to now.

Instructions

The world of computers changes very quickly. The Internet is a good example. Viewing and uploading videos on YouTube is common now, but prior to 2006 YouTube did not exist! In 2006 most people didn't have broadband either, so even if YouTube had existed not many could have used it.

Task One: Is it true that most students did not have broadband in 2006?

You can find out using a data sample at the bottom of the Teacher's instruction sheet or from the 2006 CensusAtSchool Random Sampler found at <http://www.cas.abs.gov.au/cgi-local/cassampler.pl>. The records of over 112,000 students are in this 2006 database.

- 1.** Get a sample from the random sampler.

Reference year **2006**
Select questions **All**
Sample size **200**

The random sample you get is an Excel spreadsheet of raw data. Question 6 asked "Can the Internet be accessed at your home?"

Be careful to ensure you use the sheet with the label **2006**.

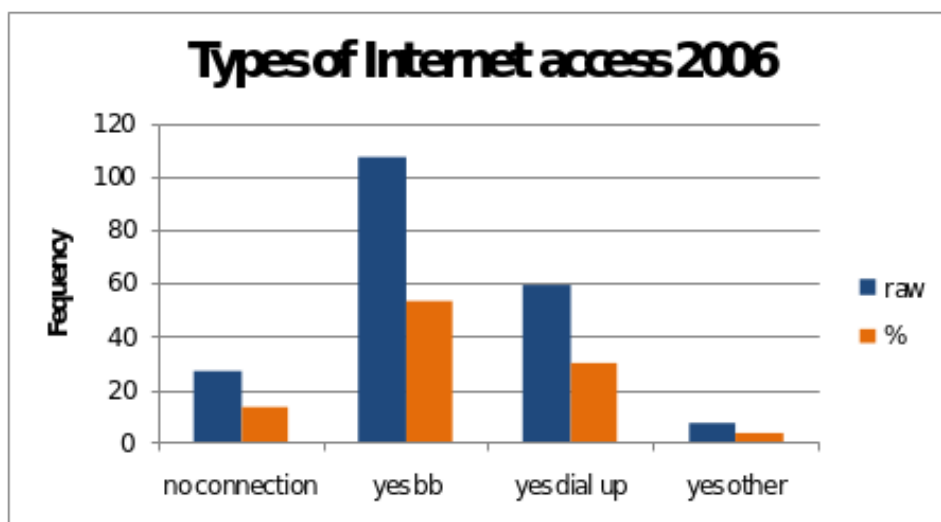
- 2.** Count each response in your sample and record it in a table like the one below.

You can use [SORT in Excel](#) to order your values.

Type of Internet Access 2006	Number of Students	Percentag e of Students
No Internet connection	<i>27</i>	<i>13.5</i>
Yes - broadband connection	<i>107</i>	<i>53.5</i>
Yes - dial-up connection	<i>59</i>	<i>29.5</i>
Yes - other (include Internet access through mobile phone etc)	<i>7</i>	<i>3.5</i>
Total	<i>200</i>	<i>100</i>

(Hint: It will be easier to count the number of students in each category if you use Excel [SORT](#) for the data first. If you are good at Excel it will be even easier if you use the [COUNTIF](#) function to do the counting for you.)

- 3.** Use a side by side graph to represent data in the table above. This can be easier to understand.



- 4.** Decide if most students had access to Broadband Internet in 2006. Your answer will need to refer to your table or graph for reasons.

The table and graph clearly show that more than half of the students had access to broadband in 2006. This was slightly less than double the next common group of dial-up users.

Task Two: Do most students have broadband today?

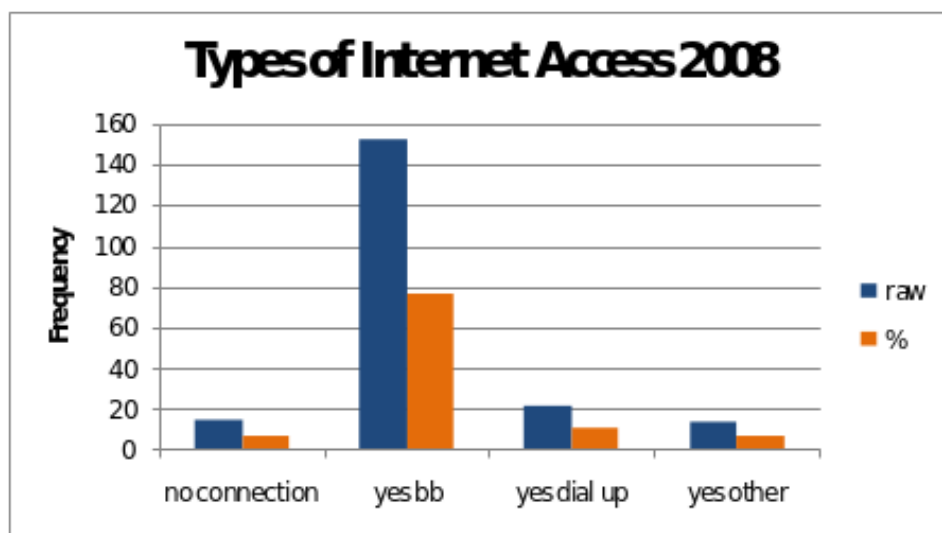
One way to answer this question would be to collect your own data. You could do this by conducting a survey of your own class and recording the data you collect. Use the question exactly as it is written above.

Or you could take a new sample:

Reference year: **Current Year**
Select questions: **All**
Sample size: **200**

- 5.** Use your data to prepare a table and side by side graph (**clearly label with the year**) similar to those you prepared for 2006 data. If you use 2008 as a reference year:

Type of Internet Access 2008	Number of Students	Percentage of Students
No Internet connection	14	7
Yes - broadband connection	152	76
Yes - dial-up connection	21	10.5
Yes - other (include Internet access through mobile phone etc)	13	6.5
Total	200	100



- 6.** Decide if most students have access to Broadband Internet today. Your answer will need to refer to your table or graph for reasons.
- Once again our table and graph show that most students (76%) have broadband in 2008. This represents about a 50% increase from 2006 results. 'No internet' and 'dial up' have dropped markedly, by nearly 50% and 64% respectively. There has*

almost been a doubling of the percentage of student who access the internet through their mobile phones etc.

From these results we might conclude that having fast internet access has become more important in the two years from 2006 to 2008. Since broadband is quicker than dial up it would be logical that people would choose this option over dial up. It is also interesting to note the increase in the use of mobile phones to access the internet. Two years ago this method was relatively rare but with the development of this technology its use has increased.

- 7.** In what way do you think the results would be different if a sample was taken in another two years?

We can reasonably predict, from the data and from our own observations that broadband access and 'other' access will continue to increase. It is possible that at some stage 'other eg mobile phones' will grow to the point that it begins to affect the increase in broadband usage.

- 8.** The local library is considering installing computers for use by residents in the local area. Do you think that your class results could be used to represent the people who live in your neighbourhood?

A sample for the class would not be representative of the neighbourhood since it is probable that students are likely to be the biggest users of the internet. Other people such as the elderly and very young children are unlikely to use the internet as much.

- 9.** Describe a sample that could be taken that could better represent your neighbourhood.

A better sample would be one that contained proportional representation of all the ages of people in the neighbourhood eg. a stratified random sample.

Extension

- 10.** Investigate the access to broadband in your neighbourhood by viewing the latest Census Data. You can do this by using the [Community Profiles](#) from the latest Census.

- 11.** Investigate the trend in Internet access by using the time series [8146.0 - Household Use of Information Technology, Australia](#). These reports have detailed tables, a summary and highlights of the data.

- 12.** Learn more about surveys by playing the [Home Internet Survey](#) game. You may have to turn up the magnification on your computer to view the activity clearly.